

## REMARKS

Claims 1, 4-6, 8, 11-13, and 22-23 are currently pending. Claims 1, 4, 6, 8, and 11-13 have been amended. Claims 7 and 14 have been cancelled. Claim 23 is new. Additionally, the specification has been amended to update the status of U.S. Patent No. 6,619,566. In view of the foregoing amendments and the following remarks, Applicants respectfully submit that the application is in complete condition for allowance and request reconsideration in this regard.

### Information Disclosure Statement

Applicants cited U.S. Patent No. 6,911,232 in the Information Disclosure Statement filed May 31, 2006, but the reference was not initialed by the Examiner as having been considered. Therefore, Applicants respectfully request consideration of the reference.

### Rejection of claims 4, 6, and 11-13 under 35 U.S.C. § 112, second paragraph

Claims 4, 6, and 11-13 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner asserts that the upstream surface and/or downstream surface recited in these claims "is confusing since it is unclear what they are upstream and downstream relative to." Office Action mailed October 25, 2007, p. 2. Applicants have amended the claims to recite the upstream and downstream surfaces relative to the movement of the strand. Specifically, Applicants have amended claims 4 and 11 to recite "a downstream surface relative to the movement of the strand" and "an upstream surface opposite to said downstream surface." Claims 6 and 13 have been amended to recite "an upstream surface relative to the movement of the strand." Applicants respectfully submit that these amendments eliminate the confusion identified

by the Examiner. Accordingly, Applicants respectfully request that the rejections of claims 4, 6, 11, and 13 under 35 U.S.C. § 112, second paragraph, be withdrawn.

The Examiner indicates that the term “said strand guide” at line 3 of claim 12 lacks proper antecedent basis. Applicants have added claim 23 to recite the nozzle further comprising a strand guide including a notch. Applicants have also amended claim 12 to depend from claim 23 instead of claim 8. As such, Applicants submit that there is now proper antecedent basis for the term “said strand guide” in claim 12 and request that the rejection thereof be withdrawn.

**Rejection of claims 1, 4, 6-8, 11 and 13-14 under 35 U.S.C. § 103(a) as unpatentable over Kwok**

Claims 1, 4, 6-8, 11, and 13-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kwok U.S. Patent No. 5,902,540 (“Kwok”). The rejection of claims 7 and 14 need not be addressed in this response because those claims have been cancelled. Of the remaining claims in this group, claims 1 and 8 are the only claims in independent form. Applicants respectfully submit that each of the pending claims in this group is allowable for at least the reasons given below.

Claim 1, as amended, recites “a nozzle for dispensing a liquid filament onto a moving strand.” The nozzle comprises “a nozzle body having a liquid supply port, an air supply port, and a liquid discharge outlet coupled in fluid communication with said liquid supply port.” An air outlet formed in the nozzle body is “coupled in fluid communication with said air supply port.” The air outlet is arranged in a particular manner to facilitate removal of particulates on the strand so that those particulates are less likely to accumulate on surfaces associated with the nozzle body. Specifically, amended claim 1 recites the air outlet being “oriented to discharge air impinging the

strand without influencing movement of the liquid filament as the filament is dispensed from said liquid discharge outlet onto the strand." As a result, the air contacts "the moving strand prior to the filament contacting the strand to remove particulates from the strand at a location upstream relative to said liquid discharge outlet." Support for this amendment can be found in at least paragraph [0052] of the application.

In contrast, Kwok discloses a die 10 having an adhesive dispensing orifice 12 arranged between two air dispensing orifices 14. Adhesive flowing from the adhesive dispensing orifice is drawn and attenuated by high velocity air flowing from the air dispensing orifices to form adhesive filaments. To this end, the air dispensing orifices are specifically designed to control the pattern of the filament formed by the adhesive. The only other air flow discussed in Kwok relates to forming a high pressure zone 16 proximate the output of the adhesive dispensing orifice to block residual flow of the adhesive. Thus, the air dispensing orifices in Kwok are all oriented to have some effect on the movement of the adhesive filament. There are no air outlets "oriented to discharge air impinging [a] strand [of substrate] without influencing movement of the liquid filament," as recited in amended claim 1.

To establish a *prima facie* case of obviousness, all of the recitations in a claim must be taught or suggested by the prior art. Because Kwok fails to teach or suggest at least an air outlet arranged in the manner recited in amended claim 1, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness and request that the rejection of claim 1 be withdrawn.

Claims 4 and 6 each depend from claim 1 and thus include at least the same recitations as claim 1. Accordingly, Applicants respectfully submit that the

Examiner has not established a *prima facie* case of obviousness with respect to claims 4 and 6 for at least the reasons discussed above. Therefore, Applicants request that the rejection of claims 4 and 6 be withdrawn as well.

Claim 8 is an independent claim reciting an "applicator for dispensing a liquid filament onto a moving strand." The applicator includes a nozzle having a liquid discharge passage and an air outlet. Applicants have amended claim 8 to recite the air outlet in a manner similar to claim 1. Specifically, Applicants have amended claim 8 to recite the air outlet being "oriented to discharge air impinging the strand without influencing movement of the liquid filament as the filament is dispensed from said liquid discharge passage onto the strand." Thus, the arguments above with respect to claim 1 apply equally to claim 8. Accordingly, Applicants request that the rejection of claim 8 be withdrawn as well.

Claims 11 and 13 each include at least the same recitations as claim 8 by virtue of depending therefrom. Accordingly, Applicants request that the rejection of claims 11 and 13 be withdrawn for at least the above reasons as well.

**Rejection of claims 1 and 5-7 under 35 U.S.C. § 103(a) as unpatentable over Bolyard in view of Kwok**

Claims 1 and 5-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bolyard et al. U.S. Patent Application Publication No. 2002/0088392 ("Bolyard") in view of Kwok. The Examiner relies on Bolyard for the disclosure of a nozzle assembly including liquid discharge outlets and a strand guide 50 positioned proximate to the liquid discharge outlets, with the strand guide including a plurality of grooves or notches. However, the Examiner acknowledges that "Bolyard . . . fails to teach the dispensing nozzle assembly includes a plurality of air discharge outlets

associated with the liquid discharge outlet and these air discharge outlets discharge air from the air discharge outlets to impinge the filament." Office Action mailed October 25, 2007, p. 4. The Examiner then relies on EP 1 176 232 A1 ("EP '232") and Kwok to cure this deficiency. Specifically, the Examiner points to the discussion in EP '232 that a nozzle assembly similar to Bolyard can be used with the dispenser disclosed in Kwok. The Examiner also indicates that Kwok is applied for the reasons discussed elsewhere in the Office Action.

As discussed above, claim 1 has been amended to recite the air outlet of the nozzle body being "oriented to discharge air impinging the strand without influencing movement of the liquid filament as the filament is dispensed from said liquid discharge outlet onto the strand." Again, for at least the above reasons, Kwok fails to teach or suggest an air outlet arranged in such a manner. Accordingly, Applicants respectfully submit that Kwok does not cure the deficiency in Bolyard acknowledged by the Examiner. For at least this reason, Applicants request that the rejection of claim 1 be withdrawn.

Claims 5 and 6 each depend from claim 1 and thus include at least the same recitations as claim 1. Accordingly, Applicants respectfully request that the rejection of claims 5 and 6 be withdrawn for at least the above reasons as well.

Claim 7 has been cancelled. Therefore, Applicants submit that the rejection of claim 7 is now moot and need not be addressed in this response.

**Rejection of claims 5, 12 and 22 under 35 U.S.C. § 103(a) as unpatentable over Kwok in view of Nakamura '895 or Nakamura '155**

Claims 5, 12, and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kwok in view of Nakamura U.S. Patent Application Publication No. 2002/0083895 ("Nakamura '895"). Claims 5, 12, and 22 also stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakamura U.S. Patent Application Publication No. 2001/0022155 ("Nakamura '155"). Because the disclosures of Nakamura '895 and '155 are similar, Applicants address the claim rejections over Kwok in view of either reference below.

Claims 5 and 22 depend from claim 1, directly or indirectly, and thus include at least the same recitations as claim 1. Claim 12 depends from claim 8 (indirectly via claim 23) and thus includes at least the same recitations as claim 8. As discussed above, Kwok fails to teach or suggest an "air outlet oriented to discharge air impinging the strand without influencing movement of the liquid filament as the filament is dispensed from said liquid discharge outlet onto the strand," as recited in amended claims 1 and 8. Applicants respectfully submit that Nakamura '895 and Nakamura '155 fail to cure this deficiency. The only arguable air outlets disclosed in both Nakamura '895 and Nakamura '155 are pattern air jet nozzles 10f for cleaning and stabilizing air jet nozzles 10i. The pattern air jet nozzles 10f direct air towards adhesive beads discharged from orifices 16a so that the adhesive beads begin an oscillating motion. The cleaning and stabilizing air jet nozzles 10i are provided immediately adjacent the adhesive discharge orifices 16a and thus affect movement of the adhesive beads. For example, "when the cleaning air is jetted continuously, irregular swings of the adhesive can be prevented, and a rectifying or stabilizing effect such as to make the bead-form

adhesive swing regularly in the right and left directions is achieved." See Paragraph [0045] of Nakamura '895. Moreover, the Examiner merely relies on both Nakamura '895 and Nakamura '155 for the alleged disclosure of a strand guide in the form of a notch rather than an air outlet arranged in the manner currently claimed.

For at least the above reasons, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness with respect to claims 5, 12, and 22. Accordingly, Applicants respectfully request that the rejection of claims 5, 12, and 22 be withdrawn.

#### **New Claim**

Claim 23 is similar to claim 5, but depends from claim 8 instead of claim 1. As discussed above, claim 23 has been added to provide proper antecedent basis for the strand guide recited in claim 12. Applicants respectfully submit that claim 23 is allowable for at least the same reasons as claim 8.

#### **Conclusion**

Applicants respectfully submit that the foregoing is a full and complete response to the Office Action mailed on October 25, 2007. If the Examiner believes any matter requires further discussion, the Examiner is respectfully invited to telephone the undersigned attorney so that the matter may be promptly resolved.

Applicants believe that no fees are due in connection with this response. However, if such petition is due or any fees are necessary, the Commissioner may

consider this to be a request for such and charge any necessary fees to deposit account  
23-3000.

Respectfully submitted,

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